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aska Department of Labor Steve Cowper, Governor, State of Alaska

The Oil Patch Slide—
How Alaska's Economy Compares to Other Oil States

Alaska Economic Trends

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The following notes pertain to Nonagricultural Wage and Salary Employment Tables:

Government includes teachers in primary and secondary schools, and personnel employed by the University of Alaska.

Benchmark date March 1985.

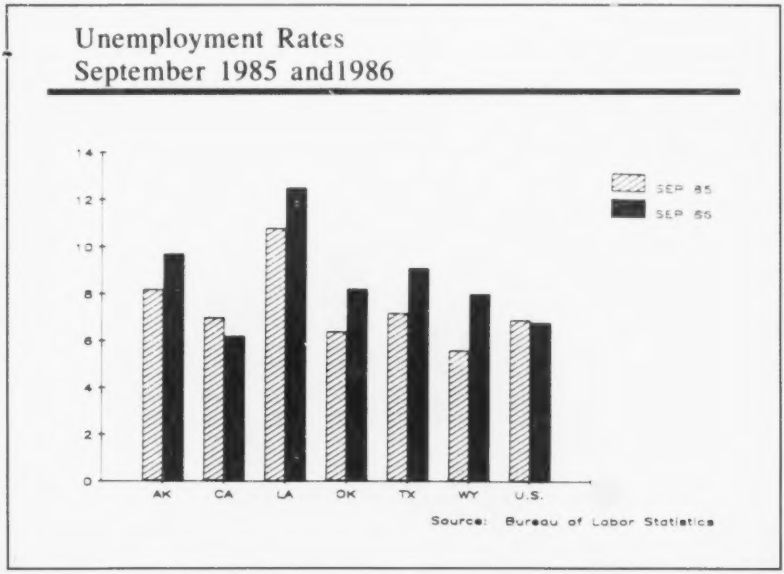
P/ Denotes preliminary estimates.
R/ Denotes revised estimates.

The Oil Patch Slide—How Alaska's Economy Compares To Other Oil States

By Neal Fried, Greg Huff and Judy Hallanger

Record unemployment, revenue shortfalls, housing auctions, bank failures, vacant office buildings, and layoffs are not just headlines in Alaska's newspapers: they can also be found in newspapers in most of the country's other major oil producing states. (In this article we define an oil-producing state as a state which produces over 100 million barrels of petroleum per year.) Almost all other major oil-producing states are sharing the economic woes of plunging oil prices. The economies of Louisiana, Oklahoma and Wyoming have been battered. Texas is faring slightly better. Only California's economy is thriving. How is Alaska faring compared to the other oil-producing states?

Analysts predicted that lower oil prices would fuel an economic boom in the nation, but they did not take into account how rapidly these lower prices would send many of the oil-producing states' economies into a tailspin. The losses have been so great that they are a drag on the national economy. In the long run lower energy prices may bode well for the national economy, but they create an uncertain future for the oil producing states.



Even before oil prices plunged below $20 per barrel in February of this year or below $10 in April, the oil producing states' employment levels were beginning to feel the adverse effects of declining oil prices. With the exception of California, the remaining oil-producing states' unemployment rates began to climb above year-ago levels in late 1985, while the nation's unemployment rate continued to inch downward. Louisiana's unemployment rates were already at the double digit level in 1985, and Alaska's and Wyoming's rate joined it in 1986. Louisiana holds the distinction of having the highest unemployment rate among the oil patch states and, for a number of months the highest unemployment rate in the nation.

All but California's economy could be classified as being in a recession. A stronger term, "depression," has been used to describe the situation in Oklahoma and selected communities within many oil states. The oil producing states' economies have reacted differently to declining oil prices because of the significant differences in the structure of their oil industries and economies.

Differences and Similarities in the Oil Patch

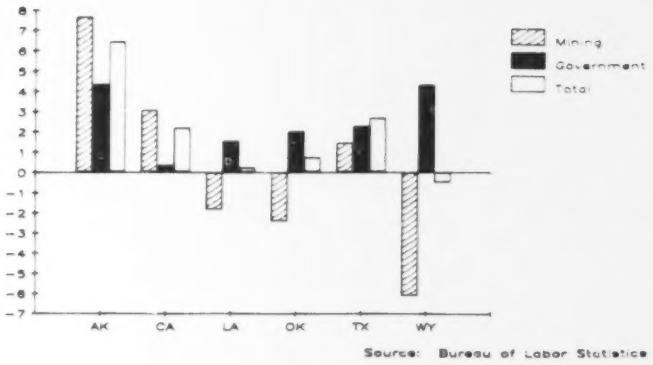
Although Alaska is the second largest oil-producing state behind Texas, the present size of its oil extraction work force is smaller than any of the large producers. For example Wyoming has an oil extraction work force almost twice as large as Alaska's but produces only one fifth the volume of oil (Table 1). Alaska's oil fields are large and more capital intensive. Alaska's oil patch is also completely dominated by large multinational corporations, with more financial muscle

Table 1
Oil Production and Employment
1985

	Crude Oil Production (thous. bbls.)	Oil and Gas Extraction Employment	Production Per Employee
Alaska	666,233	8,810	76
California	423,677	39,809	11
Louisiana	508,239	78,500	6
Oklahoma	162,739	63,288	3
Texas	888,831	249,098	4
Wyoming	128,514	14,643	9
U.S.	3,274,553	578,096	6

Source: Petroleum Independent, Sept. 1986

Average Annual Growth Rate for Mining, Government and Total Employment 1980–1985

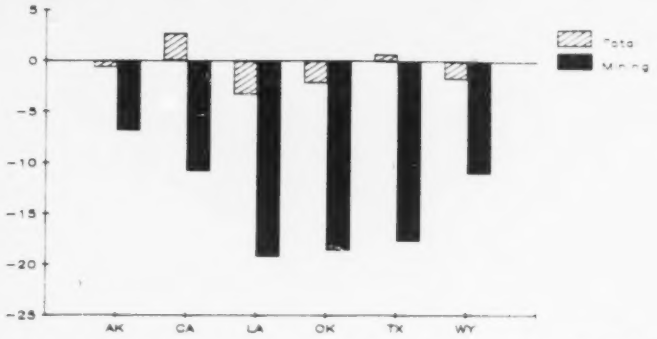


Source: Bureau of Labor Statistics

to ride out a downturn in prices than the thousands of independents and wildcatters which operate in other states. That Alaska's oil fields are capital intensive and dominated by large companies may explain why Alaska's oil and gas related employment has the smallest percentage declined in all the major oil producing states. During the first nine months of 1986, Alaska's employment in the oil industry declined 7% compared to 19% in Louisiana and Oklahoma, 18% in Texas, and 11% in Wyoming and California.

Because Alaska is dependent on oil revenues to operate state and local government, a drop in the price of oil will have a greater impact on Alaska's economy than can be measured by oil related employment. No other oil producing state is as dependent on oil revenues to operate state government as Alaska (Table 2). Alaska received, on a per capita basis, $2,607 in severance taxes in 1985, while Wyoming, the next highest state, received $480. Although Alaska's state and local governments experienced no declines in employment during the first nine months of 1986, there have been indications recently that declines are beginning to occur. Louisiana and Oklahoma have already lost employment on the local and state levels (approximately 1 percent), but the remaining states continue to indicate growth in state and local government employment. All of the states with the exception of California are presently discussing additional layoffs or the possibility of layoffs.

Percent Change in Mining Employment and Total Employment 1985 to1986*



*Based on 9-month averages. Source: Bureau of Labor Statistics.

California is a large oil producing state whose economy has not been affected by the decline in oil prices. California's economy is the largest in the nation, and its oil industry, though the fourth largest producer in the nation, is relatively unimportant to the state's overall economy. For example, less than one-half of one percent of California's wage and salary employment is employed in oil and gas extraction compared to 4% in Alaska. Less than 3% of California's state revenues come from oil revenues compared to Alaska's 84%. California's economy has benefited from the decline in oil prices as energy

Table 2
State and Local
Severance and Production Taxes
Paid by the Petroleum Industry

	Total Taxes Paid	Per Capita
Alaska	$1,358,344,000	$2,607
California	$15,146,000	$1
Louisiana	$731,760,000	$163
Oklahoma	$709,364,000	$215
Texas	$2,163,018,000	$132
Wyoming	$244,316,000	$480

Source: Petroleum Independent, Sept. 1986

costs to other industries have improved. In 1986 California's wage and salary employment has thus far grown by a healthy 2.7%, despite a 11% decline in employment in its oil and gas extraction sector.

Oklahoma, a state far more reliant upon oil production and petroleum related employment, is another story altogether. Approximately 5% or 56,000 of its wage and salary employment is directly employed in oil & gas production. Employment in this sector has fallen by 19% in 1986—13,000 jobs have been lost in this industry alone. These losses have reverberated throughout Oklahoma's economy, causing a total loss of 26,000 jobs during the first nine months of 1986. Only one industry in Oklahoma (services) has survived this period without losses.

The structure of Oklahoma's oil industry is partially responsible for the devastation declining prices have brought. More than half of Oklahoma's oil is produced from stripper wells (those which produce ten barrels of oil or less per day) which require more labor for each barrel of oil produced. With the decline in oil prices many of these wells have simply been shut down because the cost of producing a barrel of oil exceeds the price per barrel. The labor intensity of Oklahoma's oil production is clearly illustrated by comparing it to Alaska (Table 1). Oklahoma's total oil production for a year is one quarter the volume of Alaska's; however, more than seven times as many workers are employed in its oil and gas industry. With so many marginal oil wells and such a labor intensive industry, oil price declines have a disproportionate impact on Oklahoma's employment picture. In addition, Oklahoma depends on oil revenues for 12% of its state operating budget. Presently, it is operating with an anticipated deficit, expecting a $200 million shortfall this coming year. Layoffs have already occurred in state and local government and more are expected to follow.

Louisiana's picture is not that different from Oklahoma's—although possibly more desperate. Louisiana's unemployment rate has remained above 11% during all of 1985 and 1986. Its employment declines have been steeper and its unemployment rate the highest in the nation. During the first nine months of 1986 a total of 52,200 jobs have been lost. This represents a 3% loss in total employment, the largest among all oil producing states. Of this total loss, 15,600 jobs have been in the oil and gas industry alone. This represents a 19% loss making Louisiana and Oklahoma the biggest losers in the oil and gas industry of the oil producing states.

Texas and oil are inseparable. Texas is the largest oil producer in the nation. Its oil extraction industry employed more than 250,000 workers in 1985 compared to Alaska's 8,800, though its oil production was

only 33% larger than Alaska's. Approximately 47,000 jobs were lost in the Texas oil and gas industry in 1986, an 18% decline. Half of Texas industries have suffered losses. Unemployment rates climbed to 8%, the highest in Texas since the post-depression years. State government is facing a deficit of one billion dollars.

Total employment in Texas, however, continues to show slight signs of growth, even though oil is the most important industry in Texas. Texas' economy has diversified over time and continues to do so. High tech industries have made major contributions to the Texas economy. High tech research and manufacturers such as Texas Instruments, Compaq Computers, and Microelectronics & Computer Technology Corporation have located in Texas. Medical and space research are also becoming increasingly important in Texas. This has helped Texas absorb the oil price shock more easily than Louisiana and Oklahoma.

When Oil Prices Were Higher: 1980-1985

When average U.S. wellhead oil prices increased beyond $20 per barrel in 1980 and hit $31.77 per barrel in 1981, a flurry of economic activity in the major oil states resulted. Employment levels in the major oil producing states expanded, deviating from the recessionary trend of many non-oil states. But prices began to weaken in 1982, and over the next three years the average wellhead oil price in the U.S. fell from $31.77 to $24.08 per barrel. The direction of the oil-producing states' economies diverged--Wyoming, Louisiana and Oklahoma began as early as 1982 to struggle with serious economic problems, whereas Alaska, California and Texas prospered through 1985.

Alaska was the only oil state with five consecutive years of employment growth from 1980 to 1985. California, Louisiana and Wyoming experienced employment declines in 1982 as a result of factors related to the concurrent national recession and sharp declines in oil exploration and drilling activity. The California economy expanded rapidly after 1982, while Louisiana and Wyoming had two consecutive years of employment losses. In fact, Wyoming had a 7% loss in 1983, the largest single one year decline in employment of any of the oil states. Employment in Oklahoma and Texas grew through 1982 but by the following year the effects of falling oil prices and the decline in oil related employment caused total employment to fall. Nineteen eighty four brought a reprieve to Texas. Wyoming, Louisiana and Oklahoma as idle oil rigs went back to work (Table 4). Seismic activity, however, continued to decline (Table 3) suggesting at that time that the increases would be only temporary. Indeed by the following year, any hope of an upturn in drilling activity was gone as losses continued to decline. Once again the economies of Louisiana and Oklahoma regressed into a recessionary trend. Wyoming and Texas continued

Alaska Hours and Earnings for Selected Industries 1/ 2/

	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	P/ 9/86	R/ 8/86	9/85	P/ 9/86	R/ 8/86	9/85	P/ 9/86	R/ 8/86	9/85
Mining	1152.41	1149.65	1255.19	50.5	51.6	50.9	22.82	22.28	24.66
Construction	1081.30	1050.62	1112.38	43.2	42.9	44.8	25.03	24.49	24.83
Manufacturing	409.78	476.25	501.84	32.8	47.2	40.8	12.67	10.09	12.30
Food & Kindred Prod	258.82	408.24	353.23	25.3	48.6	37.3	10.23	8.40	9.47
Lumber & Paper Prod	686.83	689.23	687.59	49.2	47.5	48.6	13.96	14.51	14.09
Trans., Comm. & Utilities	552.96	559.50	620.93	36.0	37.3	39.6	15.36	15.00	15.68
Trade	380.29	372.81	407.49	33.3	33.8	34.1	11.42	11.03	11.95
Wholesale	513.32	502.46	566.23	36.2	37.0	37.9	14.18	13.58	14.94
Retail	334.95	327.98	350.54	32.3	32.7	32.7	10.37	10.03	10.72
Finance-Ins. & R.E.	379.89	390.77	426.38	33.5	35.3	37.5	11.34	11.07	11.37

1/ Prepared in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor

2/ excludes eating and drinking establishments

AVERAGE HOURS AND EARNINGS SERIES: Averages are based on data for full and part time production workers (manufacturing) and nonsupervisory workers (nonmanufacturing) and are for gross earnings and hours paid, including overtime pay and hours

to have employment growth in 1985, although layoffs in the oil related industries were heavy.

The decline of oil prices in 1981 from the peak of $31.77 per barrel left many exploration and drilling crews idle, but both the number of crude production wells and their output continued to increase into 1985. For example, seismic exploration activity in the top oil states fell 43% and the number of rotary rigs operating fell 50% between 1981 and 1985; however, the number of production wells in the six major oil producing states increased 19.5%, and their combined oil output increased by over 106 million barrels, a 4% increase. The oil states did not equally contribute to the increased production and development. Alaska was the prime contributor to production increases, while Texas' oil production continued on a trend of declining output, which began in 1972. Oklahoma, Louisiana and Wyoming had oil production increases between 1980 and 1985, but these levels were significantly below their peak production of earlier years (1927, 1971 and 1970 respectively).

From 1980 to 1985 employment in Alaska grew at a faster rate than any other major oil state—over two times faster than in Texas, the next fastest growing state. California's employment growth rate was a close third, followed by Louisiana and Oklahoma. Wyoming's 1985 employment levels were below the 1980 levels.

In Alaska the construction industry was the fastest growing industry during this period. Because several strong construction seasons be-

Table 3
Seismic Exploration Activity
1980-1985 for Major Oil States
(Crew Months)

	1980	1981	1982	1983	1984	1985
Alaska	37	82	129	58	79	48
California	157	192	221	186	152	149
Louisiana	654	501	563	423	436	280
Oklahoma	169	301	256	316	231	202
Texas	1438	1745	1583	1353	1199	932
Wyoming	274	317	253	323	306	163
U.S.	4962	5877	5676	4943	4679	3494

Source: Petroleum Independent, September, 1986.

Note: Data include government, and university activity, but exclude gravity, magnetic and other geophysical methods.

ginning in 1980 offset some weak seasons in 1984 and 1985, construction employment in Alaska averaged 12% growth over the period. This was three times the growth rate of California's construction employment and eight times the employment growth rate of Texas' construction industry.

Employment growth in the trade industry was Alaska's second fastest growing industry followed by finance, insurance and real estate, then services. In all the other major oil states and services industry was the fastest growing industry, except in Wyoming where government employment growth was number one.

Although Alaska had the honors in terms of employment growth, it also had the highest unemployment rate among the major oil states in 1980 while Wyoming had the lowest with a 4% unemployment rate. Oklahoma the following year had the lowest unemployment rate among the six major oil states and the country. Before 1982 all the oil states except Alaska had an unemployment rate below the national average. In 1982, Louisiana took the lead from Alaska by recording an unemployment rate of 10.3% and has since maintained an unemployment rate greater than Alaska's. Oklahoma and Wyoming had unemployment rates lower than the national average until 1985 despite declines in total employment. California's unemployment rates paralleled the directions of the national rate, but were slightly higher. The unemployment rates in Texas stayed well below the national rate until 1985 when both rates were at 7.1%.

All the oil states had population increases from 1980 to 1985, but Alaska had the highest percent increase. Alaska's population expanded from

Table 4
Rotary Rigs Operating
1980-1985 For Major Oil States

	1980	1981	1982	1983	1984	1985
Alaska	14	23	22	14	14	20
California	120	155	129	106	107	81
Louisiana	427	456	343	282	310	283
Oklahoma	397	698	622	285	319	252
Texas	987	1317	990	797	850	680
Wyoming	155	191	143	96	115	93
U.S.	2909	3970	3105	2232	2428	1980

Source: Petroleum Independent, September, 1986

Note: Data include offshore rigs.

402,000 people in 1980 to 539,000 in 1985 nearly a 34% change. This growth was enough to cause Alaska to surpass Wyoming in population in 1985. The slowest population growth was in Louisiana where the number of people increased 6.5% from 1980 to 1985. During this period the population growth for the other oil-producing states was Wyoming, 8.3%; Texas, 15%; California, 11.4%; and Oklahoma, 9.1%.

Alaska is a newcomer to the oil big leagues. Not until 1977 did Alaska become a leading oil-producing state. Alaska quickly rose to be the second largest oil producing state in the country, replacing Louisiana in 1979. In that year Alaska produced 16.4% of the total U.S. domestic production, 511.3 million barrels. Alaska's production increased to over 20% of the total U.S. domestic production in 1985, 666.2 million barrels.

Perhaps the most striking fact about Alaska's oil producing status is the amount of oil each Alaskan well produces. Because of the Prudhoe Bay oil field, Alaska's 977 oil wells produced on average 681,917 barrels of oil in 1985 compared to the next highest average output per well of 19,681 barrels per year in Louisiana and the lowest yearly output of 1,580 barrels per well in Wyoming. As the Prudhoe Bay field wells have yielded less production and other fields, with lower yields per well, make-up a larger share of oil production the output per well has fallen. This has been the case since 1980. Only California and Louisiana oil wells have shown an average increase in oil production over the period.

Table 5
Producing Crude Oil Wells
1980-1985 For Major Oil States

	1980	1981	1982	1983	1984	1985
Alaska	642	700	760	672	640	977
California	45591	46362	47231	47197	48542	49874
Louisiana	26014	25320	22380	23376	24508	25823
Oklahoma	78463	82639	91745	95868	99600	103000
Texas	174511	180627	187626	195595	203664	209040
Wyoming	10227	11574	11792	11349	11561	12038

Source: Petroleum Independent, September, 1986

Note: Data include wells on artificial lift and flowing. Figures as of December 31 each year.

Another striking fact about Alaska's status is the relatively low level of seismic exploration and drilling activity compared to the other major oil states. During the five year period from 1980 to 1985, Alaska's total seismic exploration activity (measured in crew months) was lower than any other state. Alaska's high exploration cost, which can be attributed to Alaska's remoteness, harsh yet fragile environment, and radical seasonal swings, limits the amount of exploration activity. Alaska also had the fewest number of rotary rigs operating. In 1981, a peak year, Alaska had 23 rigs operating compared to Wyoming's 191 rigs (the next fewest number) and Texas' 1,317 (the greatest number); but, the average cost of drilling and equipping a well are greater in Alaska than elsewhere. In 1984 the average cost per well in Alaska was $2.8 million compared to the average cost per well of $756,800 in Louisiana (the next most expensive) and of $318,400 per well in California (the least costly). Only the offshore wells in Texas, California and Louisiana had costs of drilling and equipping a well comparable to Alaska's costs. Alaska's onshore rigs are larger in size than most in the lower 48 and are state-of-the-art, contributing to higher costs of drilling.

The rapid increase in the value of oil was good to Alaska's economy during the early 1980s. Nearly all sectors of the Alaskan economy benefited from high oil prices, but the single largest beneficiary of the high oil prices was state government. Its petroleum revenues increased from $821 million in 1979 to $2.25 billion the following year and peaked at $3.57 billion in 1982. These large revenues provided the state with immense economic clout. When prices fell dramatically in 1986 the state's ability to grow ended. In 1986 Alaska's economy began a down cycle, which is expected to continue into 1987, because of lower oil prices.

Outlook

The long term outlook for Alaska is mixed. On the one hand oil prices are expected to increase in the long-run and Alaska has more proven oil reserves than any other state including Texas. On the other hand the projected North Slope oil production is expected to decline steadily in the 1990s. Although a number of large new fields will be added they are not likely to replace the inevitable decline of the enormous output from Prudhoe Bay. The future price of crude oil will determine the rate and magnitude of the expected oil production declines. Oil prices and the level of oil production are now key in determining state government revenues and the health of Alaska's economy, but, even if oil prices and oil production increase, oil will be playing a less important role in Alaska's future just as it has become less important over time in other oil-producing states.

Alaska

By Edward Eboch

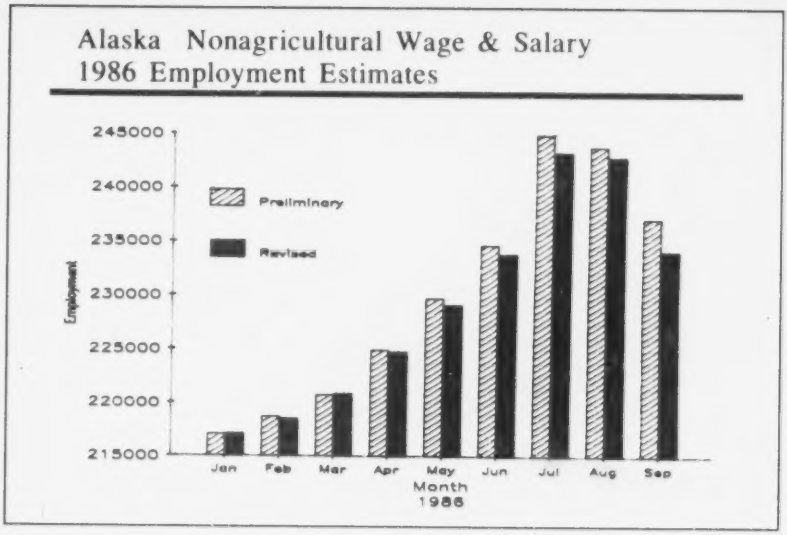
Alaska's economy continued its tailspin in October. The state's unemployment rate (10.8%) reached an all time high for the month of October. Anchorage (8.8%), the Kenai Borough (17.4%), and Juneau (12.0%) also had the highest October rates ever recorded, with Juneau's rate the highest ever. With the possibility of additional cuts in state government spending over the next year, Alaska's economy will continue to suffer employment losses.

Employment losses in October were normal, as construction, manufacturing, and tourist related firms adjust employment for the winter season; however, year-to-year losses of the magnitude now recorded are not typical. Even the loss of jobs after completion of the pipeline, while greater percentage-wise, does not match the breadth of the impact current losses are having on the economy.

After the completion of the pipeline there was a year-to-year loss in employment from October 1976 to October 1977 of nearly 7,000 jobs. The average annual year-to-year loss in employment was approximately 9,000 jobs from 1976 to 1977, a much higher percent of total employment than the current year to year losses. The following year, 1978, employment was on the rise again although employment remained flat from 1978 to 1979.

However, there is a significant difference between the losses then and now. In 1977, the losses in employment were concentrated in construction and construction related trade and services firms. Because it was recognized that the boom in employment would not continue, the secondary industries of trade, services, and finance, insurance, and real estate did not overexpand to support this temporary business activity. While there was a tremendous loss in overall employment from 1976 to 1977, many industries increased employment during this period. More important, the oil and gas industry was expanding, thereby setting the groundwork for the next expansion phase of Alaska's economy.

The current downturn is not restricted to construction and construction related businesses. Unlike the mid-1970s, expectations were that expansion would continue as oil prices rose. Oil companies would continue to increase exploration and development as well as operational personnel. State revenues and therefore state employment would increase or remain at worse constant. In addition, several mining



projects looked as if they would be in operation by the late 1980s. Falling commodity prices (oil and mineral) have changed all this.

The suddenness and size of the changes in the price of oil—the impetus for growth the past several years—has been felt in all sections of the economy. The oil industry was a growing industry with employees that earned good incomes. In addition, expansion of facilities and exploration and development activities contributed to construction industry employment. The spending of the oil industry and its employees offered opportunities in the trade, services, and F.I.R.E. industries. With the current price of oil, the oil industry is reducing direct employment, forcing wage concessions, and reducing expenditures in construction.

The lower price of oil has cut expected state tax revenues dramatically, to less than half that received in 1985. Loss of tax revenues from oil has forced state government to reduce pass through grants to local communities, drop capital projects, and eliminate or reduce services. As a result state and local government employment has declined over the year and many private firms that provide services for the state have cut employment.

With the outlook for hard rock mineral prices still in doubt many mining companies have withdrawn from Alaska and most oil companies have sold their interest in mineral prospects in Alaska. Rather than expanding and therefore providing alternative job opportunities, min-

ing companies have cut back on their operations in Alaska.

Revised Employment Estimates

With structural changes occurring in the Alaska economy it has become more difficult to successfully estimate current employment. As a result the revised employment estimates have been lower than the preliminary employment estimates (see graph). Therefore, the preliminary estimates have tended to understate the severity of employment declines. With seasonal changes behind us it should be possible to better estimate over the month and over the year losses in employment for the next several months, assuming no need to make immediate adjustment to lower oil prices.

The following is a brief explanation of how employment estimates are produced and a discussion of the problems associated with the procedure. Employment estimates are based on a sample of changes in employment provided by employers. There are three problems in making employment estimates, one that must be faced regardless of the economic climate, and two that are a result of the current economic difficulties. There is always a problem with having an adequate sample during the preliminary estimates. With a poor sample in some industries it becomes necessary to use other methods to estimate employment.

We use five methods to estimate employment for cells (subsets) within an industry. (For example, in mining estimates are made for oil and gas, metal mining, coal mining, and nonmetal mining. The results are then aggregated to give the employment estimate for mining, the published cell.) The five methods used to estimate employment are: the employment change in the sample from the previous month; the employment change in the sample from the previous year; the same percentage change as in the actual employment from the same period the previous year; the seasonal change (a factor based on historic percent changes for the month to month change), and analyst judgement.

Along with the modeling methods described above the analyst uses other information to help choose the most probable employment level for the month. When the sample is adequate the month to month sample method is preferred. With a poor sample the seasonal method is used more frequently. Analyst judgement is used when none of the methods appear to reflect current economic conditions. (For example, a large firm that is not in the sample goes out of business.)

The other methods are also used as a check on the month to month sample. When the year to year sample and the seasonal method agree

Nonagricultural Wage and Salary Employment
By Place of Work
Alaska

	p/ 10/86	r/ 9/86	10/85	Changes From: 9/86	10/85
Nonag. Wage & Salary	224300	234200	235500	-9900	-11200
Mining	7900	8100	9600	-200	-1700
Construction	17000	18300	21500	-1300	-4500
Manufacturing	10400	15200	9500	-4800	900
Food & Kindred Prod.	4100	8500	3700	-4400	400
Lumber & Paper Prod.	3000	3300	2200	-300	800
All Other Mfg.	3300	3400	3600	-100	-300
Trans. Comm. & Utilities	18800	19800	19200	-1000	-400
Trucking & Whseing.	2000	2000	2100	0	-100
Water Transportation	1400	1700	1400	-300	0
Air Transportation	6000	6300	6300	-300	-300
Other Trans. Comm. & Utilities	9400	9800	9400	-400	0
Trade	44900	46000	47400	-1100	-2500
Wholesale	7700	8200	8700	-500	-1000
Retail	37200	37800	38700	-600	-1500
Gen. Mer. & Apparel	5600	5600	5700	0	-100
Food Stores	6200	6400	6100	-200	100
Eating & Drinking Pl.	13700	14000	14100	-300	-400
Other Retail Trade	11700	11800	12800	-100	-1100
Finance Ins. & R.E.	12700	12800	13100	-100	-400
Services & Misc.	43900	46000	45400	-2100	-1500
Government	58700	68000	69800	700	-1100
Federal	18200	18200	17600	0	600
State	20000	19900	20900	100	-900
Local	30500	29900	31300	600	-800

Prepared in Cooperation with the U.S. Bureau of Labor Statistics.
Government includes teachers in primary and secondary schools, and personnel employed by the University of Alaska.

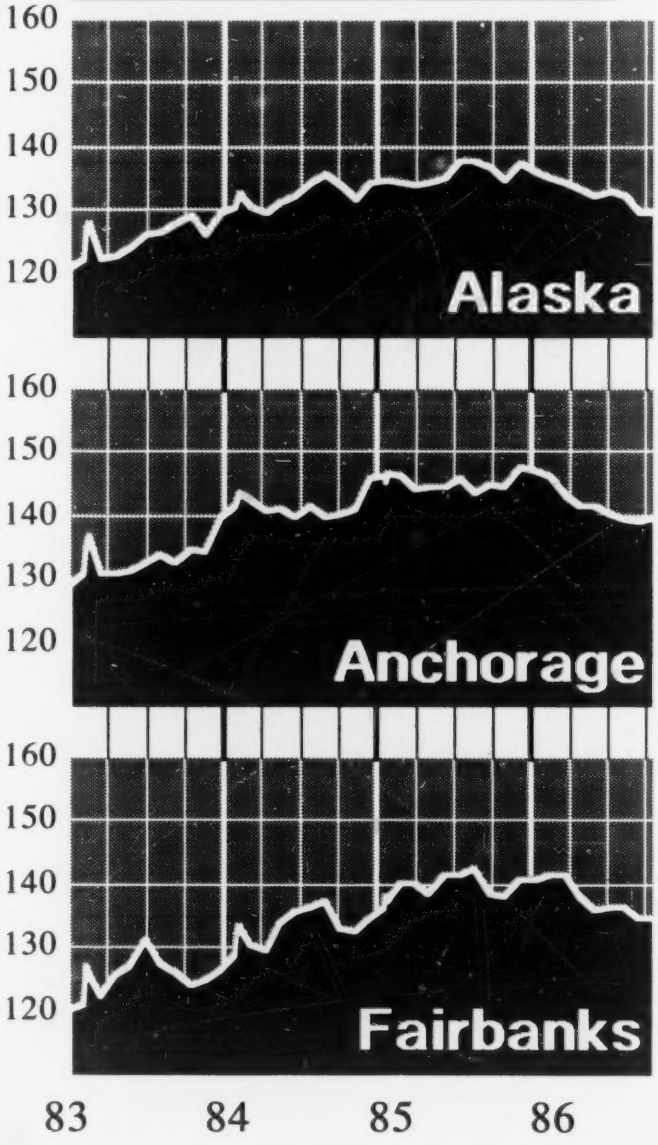
Benchmark date: March 1985.

p/ Denotes preliminary estimates.
r/ Denotes revised estimates.

with the month to month sample the analyst is confident of the estimates. With current economic conditions the various methods are less likely to agree. While Alaska has a large sample relative to the size of the state, and the support of Alaska firms is appreciated, our sample has dropped off in some cells recently. As a result the sample has become less reliable as a predictor, especially for the preliminary estimates. As firms drop out of the market other firms may increase employment as a result. If this firm is part of our sample it may indicate a greater level of employment than a complete sample would suggest.

This problem is much worse during the summer months when firms change levels of employment rapidly from month to month. As a result, as the sample has improved for the revised estimates, employment has been revised downward (see graph). While these problems will continue until the economy has arrived at its new base level and employment begins to grow again, employment estimates should be less of a problem over the next several months as employment changes from month to month are less dramatic during the winter.

COMPOSITE NONAG. EMPLOYMENT INDEXES



SEASONALLY ADJUSTED 1983 TO PRESENT

source: ak. dept. of labor

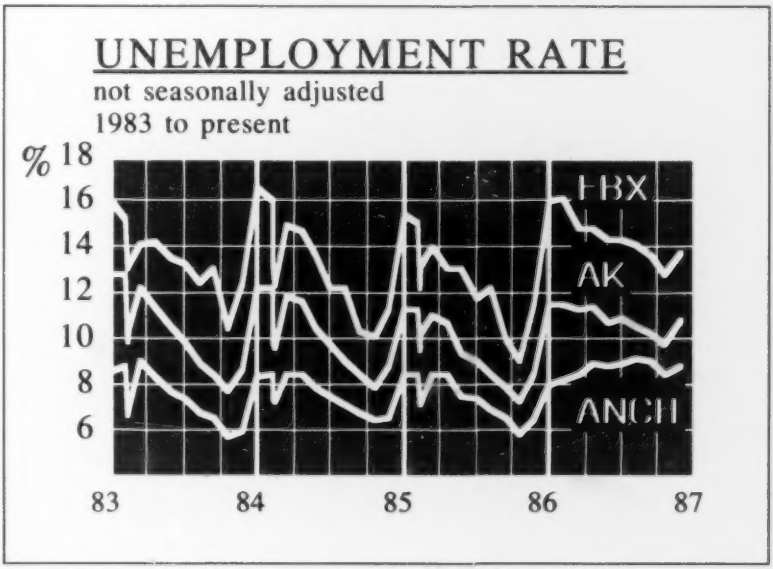
Anchorage/MatSu

By Greg Huff

Current Trends

Anchorage's employment statistics for October continue to reflect hard economic times for many Anchorage residents. Compounded by seasonal layoffs, the unemployment rate rose to an all-time high 8.8% for October, 2.4 percentage points above last October. An estimated 10,402 Anchorage workers were unemployed, 2,748 more workers than during the same period last year.

Employment losses have been widespread. Only retail trade, state government, and certain sectors of the transportation, communications and utilities industry had employment gains in October. The retail trade sector had seasonal employment increases as they geared up for the holiday season. The over-the-month gain in state government employment was a result of increases in state education employment, however, compared to last October, state education employment is down 3.1%.



In the transportation sector, air transportation employment has remained above last year's levels because of the entrance of United Airlines and AirCal into the Anchorage market. Because of extensive flood damage to Alaska Railroad's tracks and bridges, the demand for trucking goods north to Fairbanks was unseasonably high. Without the seasonal decline that normally occurs in October, trucking employment was greater than last year.

The construction industry continued to be the hardest hit by layoffs, both in percent and absolute terms, with employment levels falling by 2,200 or 21.6% from year ago levels. The next hardest hit in terms of percentage, was the mining industry which is primarily oil and gas industry employment. The bulk of the decline in employment was in the seismic and drilling services firms which have been the most severely affected by declining oil prices.

In absolute terms, the loss of 1,350 jobs in the trade industry was second only to construction. Most of the declines in the trade industry are in sectors dependent upon the construction industry, such as hardware and building supply stores. Automotive dealers have been the next hardest hit within the trade industry as employment fell over 11% from last October's level.

The services industry followed the trade industry in employment losses, with 750 jobs less than year-ago. The job losses were concentrated in the business services and construction related services sectors, such as architectural, engineering and surveying firms. Despite declines in these businesses, the service industry as a group continued to register over the year employment gains until August of 1986 when the sectors that were still experiencing some growth could no longer offset the declines in other sectors.

Services: A Closer Look

The following graph illustrates the yearly percent change by month in employment levels for the service industry compared to total Anchorage employment from January 1980 to October 1986. The trends are similar but the services industry grew at a faster rate.

Between 1980 and 1982 employment growth in services was lead by the hotel sector (see table), which increased nearly 40% in two years.

Labor Force By Region and Census Area

	Labor Force			Unemployment			Rate			Employment		
	P/ 10/86	R/ 9/86	10/85	P/ 10/86	R/ 9/86	10/85	P/ 10/86	R/ 9/86	10/85	P/ 10/86	R/ 9/86	10/85
Alaska Statewide												
Anchorage/Mat-Su Region												
Anchorage Borough												
Matanuska-Susitna Borough												
Gulf Coast Region												
Kenai Peninsula Borough												
Kodiak Island Borough												
Valdez-Cordova Census Area												
Interior Region												
Fairbanks North Star Borough												
Southeast Fairbanks Census Area												
Yukon-Koyukuk Census Area												
Northern Region												
Nome Census Area												
North Slope Borough												
Northwest Arctic Borough												
Southwest Region												
Bristol Bay Borough												
Dillingham Census Area												
Bethel Census Area												
Kusilvak Census Area												
Wade Hampton Census Area												
Southeast Region												
Aleutian Islands Census Area												
Juneau Borough												
Ketchikan Gateway Borough												
Prince of Wales-Outer Ketchikan Census Area												
Sitka Borough												
Skagway-Yakutat-Angoon Census Area												
Wrangell-Petersburg Census Area												

P: Preliminary R: Revised ...: Not Available

Federal employers include the armed forces and civilian employees in the United States. The Census Bureau conducts the survey for the Federal Government. Although this survey is used to measure the unemployment rate for the State, it is not designed to produce reliable estimates for individual areas. These estimates are prepared by the Alaska Department of Labor's Research and Analysis Section. The sample used is too small to produce reliable estimates for most areas. Therefore, the estimates for individual areas may show substantial changes that do not necessarily reflect the actual situation in the area. The Alaska Department of Labor cautions users to give consideration to this when using the data. For more information on the survey and the data that are derived from it, contact the Research and Analysis Section, P.O. Box 25501, Juneau, Alaska 99802-5501 or telephone (907) 465-4500.

Change in Services and Total Employment Anchorage, 1980 – 1986

Business services employment, up by 23%, also grew substantially during those two years. Between 1982 and 1983 the services industry grew at about the same pace as total employment. This was a result of declines in hotel employment, as the Anchorage Hilton reduced employment during remodeling, and a slowing of employment growth in construction related services. The spike in the graph in late 1983 to early 1984 was a result of rapid increases in health and business services.

Anchorage Services Employment
Annual Average
1980–1986

Year	Total Services	Hotels	Business Services	Medical	All Others
1980	27,947	1,931	2,958	3,438	19,621
1981	28,939	2,140	3,117	3,512	20,170
1982	31,425	2,554	3,181	3,962	21,727
1983	32,830	2,515	3,633	4,153	22,529
1984	35,210	2,579	3,945	4,599	24,087
1985	36,955	2,941	3,675	4,833	25,506

Source: Alaska Department of Labor

Nonagricultural Wage and Salary Employment
By Place of Work
Anchorage

	p/ 10/86	r/ 9/86	10/85	Changes From: 9/86	10/85
Nonag Wage & Salary	122200	121700	117900	500	4300
Mining	400	400	450	0	-50
Construction	8600	8400	10200	200	-1600
Manufacturing	2900	2700	2750	200	150
Food & Kindred Prod.	700	700	650	0	50
Other Mfg	2200	2000	2100	200	100
Trans, Comm, & Utilities	14800	14700	15100	100	-300
Trucking & Warehsg	1200	1200	1150	0	50
Water Transportation	400	400	350	0	50
Air Transportation	4200	4100	4300	100	-100
Other Trans, Comm, & Utilities	9000	9000	9300	0	-300
Trade	27400	27400	28800	0	-1400
Wholesale	5200	5200	5300	0	-100
Retail	22200	22200	23500	0	-1300
Gen. Merchandise	2300	2300	2350	0	-50
Food Stores	3200	3200	3150	0	50
Eating & Drinking Pl	8400	8400	8650	0	-250
Other Retail Trade	7700	7700	8400	0	-700
Finance Ins. & R.E.	8400	8400	8750	0	-350
Services & Misc	29200	29100	28800	100	400
Government	29400	29250	29250	150	150
Federal	9900	10050	9950	-150	-50
State	7200	7200	7000	0	200
Local	9800	9800	9800	0	0

Nonagricultural Wage and Salary Employment
By Place of Work
Anchorage-MatSu

	p/ 10/86	r/ 9/86	10/85	Changes From: 9/86	10/85
Nonag Wage & Salary	128000	127800	128100	1900	-100
Mining	3550	3550	4150	0	-600
Construction	9700	9050	11150	650	-2450
Manufacturing	2700	2600	2850	100	-150
Trans, Comm, & Utilities	10950	11200	10900	-250	50
Trade	29400	29400	30750	0	-1350
Finance Ins. & R.E.	8850	8900	9250	-50	-400
Services & Misc	27000	27800	27800	-800	-800
Government	28900	29150	29300	-250	-400

Fairbanks/Interior

By Neal Fried

Fairbanks' Civilian Side of the Military

Approximately 1,800 Fairbanks civilian residents earn their living at Fort Wainwright or Eielson Air Force Base. (Civilian resident includes the spouse of military personnel.) This represents 6% of Fairbanks' total wage and salary employment and 65% of all federal civilian employment in Fairbanks. This makes the military one of the single largest employers in Fairbanks. Additionally, approximately 6% of Fairbanks total payroll and 56% of all federal civilian payroll comes from the military civilian employment on these two military installations.

Federal civilian employment (including military and nonmilitary federal employment) has grown more slowly over the past five years than other industries in Fairbanks. In spite of this, the gains have been impressive compared to the national picture. Nationally, federal employment has remained essentially flat over the past five years compared to 17% growth of federal government employment in Fairbanks. Most of the growth in Fairbanks' federal employment has come from the military, not the civilian agencies.

Over the past five years federal employment was a declining share of Fairbanks' total employment. In 1980, federal civilian employment represented 11% of Fairbanks' total employment, compared to 9% in 1985. This trend will reverse itself, however, as much of Fairbanks' economy contracts and federal employment grows.

Military Keeps Federal Employment Growing

Federal employment will be one of the few sectors of the economy that will grow during the next two years. Military civilian employment increased at Eielson AFB in 1985 and, if the first quarter 1986 employment is a good indication, Eielson's ranks of military civilians will increase in 1986.

Fort Wainwright's federal government employment levels have changed little over the past four years but major gains will likely take place with deployment of the light infantry in January 1987. During the next two years the army has indicated that a total of 1,500 new troops will be arriving at Fort Wainwright. If today's ratio of military civilians to uniformed military (Table 1) is any indication of what the ratio might be in 1987 and 1988, more than 400 civilian jobs may be created with the additional troop strength.

Table 1
Uniformed and Civilian Employment
On Fort Wainwright
1982-1986*

Year	Uniformed Military	Military Civilian Employment**	Ratio of Uniformed/ Civilian
1982	2676	728	3.7
1983	2582	761	3.4
1984	2550	770	3.3
1985	2550	787	3.2
1986	2600	802	3.2

Uniformed and Civilian Employment
On Eielson Air Force Base
1982-1986*

Year	Uniformed Military	Military Civilian Employment**	Ratio of Uniformed/ Civilian
1982	2390	732	3.3
1983	3232	770	4.2
1984	3332	805	4.1
1985	3362	929	3.6
1986	3338	1000	3.3

Source: AK Dept. of Labor, Research & Analysis Section

* 1986 is First Quarter data.
**Includes all civil service and nonappropriated funded personnel. It does not include private contract personnel.

The growth in the federal civilian sector, which will occur simultaneously with the contraction in much of the remainder of Fairbanks' economy, means the military's presence will regain some of the prominence in Fairbanks' economy which it lost with the development of Prudhoe Bay. By 1988 military civilian employment could make up as much as 8% of total wage and salary employment in Fairbanks, compared to 6% today, and it could make up 68% of all federal employment compared to the present 62%.

Current Trends

More of Fairbanks' industries have joined the ranks of the employment losers. In October only two out of Fairbanks' eight industries remained above year-ago levels. It may be only a short time before the remaining holdouts, manufacturing and services, join the rest of the

Nonagricultural Wage and Salary Employment
By Place of Work
Fairbanks

	p/ 10/86	r/ 9/86	10/85	Changes From: 9/86	10/85
Nonag Wage & Salary	29050	30200	30150	-1150	-1100
Mining	200	200	250	0	-50
Construction	2750	3250	3550	-500	-800
Manufacturing	650	650	600	0	50
Trans Comm & Utilities	2800	2950	2850	-150	-50
Trucking & Whseing	450	400	450	50	0
Air Transportation	950	1000	900	-50	50
Other Trans Comm & Utilities	1400	1550	1500	-150	100
Trade	5950	6400	6250	-450	-300
Wholesale	900	900	1050	0	-150
Retail	5050	5500	5200	-450	-150
Gen Mer & Apparel	550	500	500	50	50
Food Stores	850	850	800	0	50
Other Retail Trade	3650	4150	3900	-500	-250
Finance-Ins & R E	1050	1050	1050	0	0
Services & Misc	5850	6200	5700	-350	150
Government	9800	9500	9900	300	-100
Federal	2950	2900	2700	50	250
State	4100	3900	4250	200	-150
Local	2750	2700	2950	50	-200

Nonagricultural Wage and Salary Employment
By Place of Work
Interior

	p/ 10/86	r/ 9/86	10/85	Changes From: 9/86	10/85
Nonag Wage & Salary	33150	34700	34300	-1550	-1150
Mining	300	350	350	-50	-50
Construction	2950	3450	3750	-500	-800
Manufacturing	650	700	650	-50	0
Trans Comm & Utilities	3150	3350	3250	-200	-100
Trade	6500	6850	6650	-350	-150
Finance-Ins & R E	1100	1150	1100	-50	0
Services & Misc	6250	6700	6100	-450	150
Government	12250	12150	12450	100	-200

industries. Total wage and salary employment fell 1,100 or 4% over the year. The biggest contributor to this decline was once again construction, but other industries are now declining.

The initial declines in trade came largely from the falling demand for building materials as construction activities declined. More recently the losses in this industry have broadened to include eating and drinking establishments and other retail establishments. Because of the present economic uncertainty, consumers seem to be cutting back on discretionary purchases. The declining economy also means there is simply less income to spend on consumer goods, causing the retail trade sector to reduce employment.

Total government employment losses over the year remain small at this time because of the increase in federal employment: the total government over-the-year decline in October was 1%. Sizable losses have occurred, however, in both local and state government (Table 2). Local government employment has declined 7% while state government employment declined 4%.

The October unemployment rate for Fairbanks corresponds closely with the declines in employment. October's unemployment rate of 13.8% was almost a point above September's and a little more than two points above the year-ago level. The number of unemployed in October has grown to 4,410, or 740 above last year's level.

Table 2
State and Local Government Employment*

	10/86	10/85	Changes From: 10/85
State Government	1538	1620	-82
University of Alaska**	2440	2521	-81
City of Fairbanks	257	250	7
Fairbanks North Star Borough	366	431	-65
Fairbanks Municipal Utilities System	327	358	-31
Fairbanks North Slope Borough School District	1680	1775	-95

*These figures do not include the City of North Pole, some fire stations, the Alaska Railroad and some commissions and boards.

**Tanana Valley Community College employment is included.

Gulf Coast

By Neal Fried

Current Trends

The Kenai Peninsula Borough's October unemployment rate brings nothing but grim news. The Peninsula's unemployment rate of 17.4% was the highest in the state and was six percentage points above year-ago levels. The number of unemployed increased by 1,106 over-the-year, bringing the total number of unemployed on the Peninsula to 2,991. Kodiak's unemployment rate was 10.1% while Valdez-Cordova's rate of 9.1% was the lowest for the region in October.

The beginning of winter put a chill on the entire Gulf Coast region's economy in October. The salmon season is over, tourist related activity has fallen to a trickle, and many construction projects are closing down for the winter. The seasonal slowdown in these activities caused declines in employment in almost all of the region's industries. Manufacturing (predominately fish processing) had the largest declines in employment in October. After a strong salmon season all salmon activity ended in October causing employment in this industry to tumble by 1,750.

The other three big seasonal losers in October were trade, construction and transportation. October's losses in wholesale and retail trade are a result of the end of the tourist season and the overall seasonal decline in the economy. Construction is a perennial seasonal loser because of the difficulty of building in the winter. Improved technology has made winter construction easier than in the past, but the additional expense and the elements still take their toll. Declines in transportation employment follow construction, fishing, and tourism industries because transportation provides so much support to these industries.

Over-The-Year Changes

A better measurement of an area's economic health is the over-the-year changes. The Gulf Coast region's employment statistics indicate its economy has been influenced by the statewide economic recession. Total wage and salary employment in the region fell 3%. Half of the regions eight major industries have fallen below year-ago levels. Construction was the biggest loser, followed by trade, transportation and government.

Nonagricultural Wage and Salary Employment
By Place of Work
Gulf Coast

	p/ 10/86	r/ 9/86	10/85	Changes From: 9/86	10/85
Nonag Wage & Salary	20200	22550	20900	-2350	-700
Mining	900	900	800	0	100
Construction	1800	1950	2600	-150	-800
Manufacturing	2650	4400	2300	-1750	350
Food & Kindred Prod	2000	3700	1600	-1700	400
All Other Mfg	650	700	700	-50	-50
Trans Comm & Utilities	1650	1800	1800	-150	-150
Trade	3650	3950	3850	-300	-200
Wholesale	450	600	500	-150	-50
Retail	3200	3350	3350	-150	-150
Finance-Ins & R E	650	650	650	0	0
Services & Misc	3350	3400	3250	-50	100
Government	5550	5500	5650	50	-100
Federal	550	550	550	0	0
State	1550	1600	1700	-50	-150
Local	3450	3350	3400	100	50

October construction employment has fallen by 31% since last year. The biggest declines are in residential and private commercial construction which has come to a standstill in some areas. The number of building permits issued on the Kenai Peninsula for the first half of this year fell by 63% from last year. All communities on the Peninsula experienced losses in residential construction.

According to Frykholm & Schaafsma Appraisal, apartment vacancies in Soldotna doubled from 12% in November 1985 to 24% one year later, and Kenai's vacancies tripled from 9% to 27%. Kodiak was the only community in the region which actually had gains in residential construction activity. Public construction held steady through October because work continued on the Bradley Lake Dam, Seward Prison, and school construction on the Kenai Peninsula.

Trade has fallen on hard times because of the slowdown in construction and the general economic decline. Wholesale trade employment has dropped because of a dramatic decline in the sale of building materials. Retail trade has also been affected by the decline in construction related purchases but the general economic decline has hurt

retail trade more. Trade is often one of the first industries to feel the pinch during a recession. When income falls and economic uncertainty prevails people cut back immediately on discretionary purchases. Retail trade may also have over-expanded its capacity during the last boom and consequently may go through a period of readjustment.

Over-the-year declines in government in October remain small in the Gulf Coast. Although the decline was only 2%, all of the losses came from state government, which fell by 9% or 150 jobs. More significant is the fact that government employment is now falling. In the past when other sectors of the economy were contracting, the government sector often provided some buffer to these declines. This is not true during the present recession, which may be a sign of its severity.

One positive over-the-year comparison is fish processing employment—up by 400 jobs or 25% in October. Good salmon seasons and high prices have pumped additional income into many of the region's communities. Though the crab and shrimp fisheries are not yet on the mend, they apparently will not get any worse. Bottom fishing remains in its infancy stages but an increasing number of plants are processing bottom fish. Presently, approximately eight canneries in Kodiak are processing bottom fish. Not only does this improve the health of the overall industry but it also provides additional activity during the slack non-salmon months.

Southeast Alaska

By John Boucher

Federal Government Employment in Southeast Alaska

The federal government is one of Southeast Alaska's most important employers. Historically, it has been one of the regions largest employers. Perhaps more important than the size of the federal government work force in Southeast Alaska is the year around stability federal jobs provide nearly every local economy in the region.

This article will briefly examine the federal government's prominence in Southeast Alaska since statehood. Following that will be an in-depth look at which federal agencies provide employment in the region as well as agency and area employment patterns from 1982 to 1985. This article will conclude with a brief outlook for federal government employment in the region.

A clear understanding of what constitutes federal government employment is important. Federal government employment in this context includes federal agencies such as the U.S. Forest Service and Bureau of Indian Affairs. In addition, civilian employees of the armed forces are included in these figures. No uniformed military are counted in these figures. Because military personnel are excluded, it can be safely said that the federal governments contribution to the economies of communities in the Southeast is understated by these figures.

Federal government's position within the Southeast Alaska economy has become less prominent since early statehood. In 1964, nearly 16 percent of all wage and salary jobs in the region were with the federal government. By 1974, federal government jobs in the region had decreased while other employment in the region had increased substantially. Federal governments share of total employment had dropped to 8.6 percent of total employment by this time.

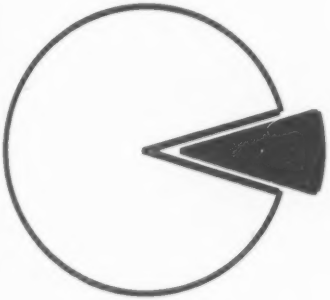
Federal government employment increased from 1974 to 1984, but not as fast as other sectors of the economy. Federal government's share of total employment continued to slip during this period, falling to 7.2 percent of total employment. (see Graph)

Federal Government Employment
Southeast Alaska 1964 – 1974 – 1984

1964

Other Employment
11,363 8.4%

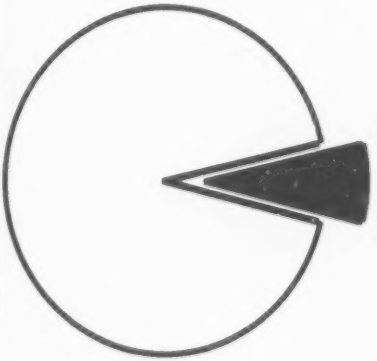
Fed Govt.
2142 15.9%



1974

Other Employment
20,200 91.4%

Fed Govt.
1900 8.6%



1984

Other Employment
26,788 92.8%

Fed Govt.
2087 7.2%

Federal Government Employment 1982-1985

Six federal agencies dominate federal government employment in Southeast Alaska. The U.S. Department of Agriculture is the largest federal agency in Southeast Alaska. Other large agencies in the region are the U.S. Postal Service, the U.S. Department of Health & Human Services, the U.S. Department of Transportation, the U.S. Department of Interior and the U.S. Department of Commerce.

Each agency has its own mission but federal employment in the region serves one of two purposes. Federal government in Southeast Alaska either provides essential services that would be otherwise unavailable or manages federal lands and resources within the region.

Two of the largest agencies are resource managers. The U.S. Department of Agriculture is a large employer because of the U.S. Forest Service personnel needed to manage the Tongass National Forest. The large contingent of Department of Commerce employees is due to the National Oceanic and Atmospheric Administration which manages the federal water resources in Alaska.

Four of the largest federal employers in the region provide essential services. The Department of Interiors largest agency in Southeast Alaska is the Bureau of Indian Affairs (BIA). The BIA provides infrastructure such as roads and housing to smaller communities in the region. The Department of Transportation has a large number of employees due to the Federal Aviation Administration and the Coast Guard 17th District headquarters. U.S. Department of Health and Human Services employees are predominantly located in Sitka at the Alaska Native Public Health Service Hospital. The large contingent of Postal Service employees could be expected given the geography of Southeast Alaska.

Federal government employment declined about six percent from 1982 to 1985. Declines in federal employment were not the result of across the board cuts to all federal agencies. Some agencies flourished from 1982 to 1985 while other agencies decreased their presence in the region. Table 1 summarizes employment by agency for 1982-1985.

The largest losses in federal employment during the last four years came within the Department of Interior and the Department of Agriculture. From 1982 to 1985 the Department of the Interior lost 125 employees while the Department of Agriculture lost 106 employees. Almost all of the jobs lost in the Department of the Interior could be attributed to the closure of Edgecumbe High School at the end of the 82-83 school year, which was run by the Bureau of Indian Affairs. The

Table 1
Federal Government Employment by Agency
Southeast Alaska 1982-1985

	1982	1983	1984	1985	Percent Change 82-85
U.S. Courts	9	8	7	7	-22.2%
U.S. Treasury	24	17	23	27	12.5%
Corps of Engineers	1	0	0	0	-100.0%
Department of Interior	299	266	182	174	-41.8%
Bureau of Mines	43	39	33	33	-23.8%
Dept of Energy	17	14	10	16	-5.9%
National Park Service	29	40	61	68	134.4%
Dept of Agriculture	943	904	875	837	-11.2%
Dept of Labor	11	13	13	13	18.2%
Dept of Commerce	194	201	197	190	-2.1%
Health & Human Services	199	199	206	206	3.5%
Dept of Transportation	198	199	196	186	-6.0%
U.S. Post Office	160	171	204	213	33.1%
Veterans Administration	70	75	83	88	25.7%
TOTAL 1/	2216	2163	2087	2085	-5.9%

1/ Total will not add due to rounding

Department of Agriculture jobs lost have been primarily within the U.S. Forest Service. Since 1980 consolidation of services to regional offices as well as the gradual elimination of positions has put Department of Agriculture employment on a steady downward trend.

Two agencies experienced strong growth from 1982 to 1985. The Postal Service added 63 jobs during this period while the National Park Service added 39 jobs. Increases in Postal Service employment are related to increasing population in the Southeast region, particularly in Juneau. As the capital city has grown and state government has grown, the burden on mail service in the capital city has steadily increased. The National Park Service employment also increased dramatically as increased population and a growing tourist trade has increased visitations to the national parks.

Federal Employment by Area

Every census area in Southeast Alaska has at least some federal employment. Since Juneau is a regional headquarters for many federal agencies, it has the lions share of federal employment. Following Juneau in the number of federal employees are Sitka and Ketchikan.

In Juneau federal government employment is spread among various agencies while in other census areas one or two agencies tend to dominate the federal government employment picture. In Ketchikan, Petersburg and Wrangell at least 60 percent of federal government employment is with the U.S. Forest Service. In Sitka the Forest Service and the Alaska Native Public Health Service Hospital combine for over 80 percent of the federal government employment. On the other hand the largest federal employer in Juneau has about 27 percent of the total federal work force.

Larger fluctuations in federal employment, both up and down, characterize census areas outside of Juneau. This is not surprising since these areas tend to be at the mercy of the fiscal fortunes of one agency. For example, the U.S. Forest Service has cut employment in Alaska steadily since 1980. Sitka, Petersburg, and Ketchikan have all had cuts in Forest Service employment, which meant large reductions in federal government employment in these communities. On the other hand, Juneau has had cuts in Forest Service employment but the cuts have not made as large an impact on the total federal employment picture. In addition, Juneau benefits from the consolidation of some local office functions to the regional office level.

The employment cuts in the Forest Service and the closure of Mt. Edgecumbe School by the Bureau of Indian Affairs had the largest impacts on area employment. Sitka lost 360 jobs from 1982 to 1985 as a result of those changes. Most federal agencies in Sitka gained employment during this period but the small gains made were swamped by the 140 employees lost at Mt. Edgecumbe and the 20 lost in the Forest Service. Fortunately for the Sitka economy, Mt. Edgecumbe has resumed operation, and many of the jobs lost there were picked up by the state.

Ketchikan lost 60 federal jobs while Petersburg lost 40 during this period, and all the losses could be attributed to the Forest Service. In Ketchikan about half of the lost employment was due to gradual elimination of positions and the other half was due to the transfer of one ranger station from Ketchikan to Prince of Wales Island. In Petersburg the Forest Service losses were attributable to gradual elimination of positions.

Prince of Wales, Juneau, and Skagway gained additional federal employment during this period. Gains in Prince of Wales were attributable to the aforementioned transfer of a ranger station from Ketchikan. Skagway federal government employment gains were all in the National Park Service. Juneau gained federal employment from three different agencies: the Veterans Administration, the Postal Service, and the Bureau of Indian Affairs.

Table 3
Federal Government Employment by Area
Southeast Alaska 1993-1997

	1993	1995	1996	1997	Percent Change 1993-97
Forest Service	781	741	731	741	-5.1%
Parks	71	71	69	71	0.0%
Wildlife	71	71	69	71	0.0%
Fisheries	71	71	71	71	0.0%
Coast Guard	271	261	261	261	-3.7%
FAA	111	111	111	111	0.0%
Postmasters	111	111	111	111	0.0%
Military	111	111	111	111	0.0%
Other Services	111	111	111	111	0.0%
Public Works	111	111	111	111	0.0%
Subtotal	1,911	1,871	1,871	1,871	-2.1%
TOTAL	2,111	2,071	2,071	2,071	-1.9%

Outlook for Federal Employment

The future outlook for federal government employment in Southeast Alaska is for continued slow contraction. Federal land managers are bent on cutting spending and consolidating activities. As examples, two of the federal agencies which are major employers in Southeast Alaska are downsizing. The Forest Service has announced plans to reduce its workforce by 10% over the next five years. The Coast Guard has announced plans to close its Ketchikan Air Station.

One of the largest employers over the past several years has been the Forest Service and the outlook for their employment levels is not bright. Employment cuts in Forest Service offices in Southeast Alaska are planned to continue to reflect a reduction of over 10 percent a year. If Congress should terminate the current method of funding the Timber Salvage Fund, or a similar program, many more Forest Service employees could suffer a drastic change in Southeast Alaska.

The Bureau of Indian Affairs has also experienced cuts the past several years primarily because of its employment cuts for BIA schools. The BIA let go over a dozen employees from 1993 to 1995 after the state takeover of the BIA schools. The BIA has subsequently maintained their 1993 level.

Currently the Alaska Power Administration is attempting to sell all the Southeast hydroelectric projects. If the attempt is successful the federal employment in the region would be cut. Most of the power

reported that the U.S. Coast Guard is considering a reorganization plan which would relocate civilian employees outside the state. Should these plans be implemented they would cut into the region's federal employment significantly.

The fastest growing agencies, the National Park Service and the Postal Service will not have the rapid growth they have had for the past several years. Gains in Postal Service employment have been in response to population growth and the growth in mail volumes associated with an increasing state government. Population growth in Southeast Alaska has subsided and oil prices are forcing the state government to contract. Therefore the Postal Service should not need to expand nearly as rapidly in the future. The National Park Service will probably continue to experience steady growth due to increasing tourism, but visitations to the parks will probably not increase at the pace they did from 1982 to 1985.

Nonagricultural Wage and Salary Employment
By Place of Work
Southeast Alaska

			Changes From:		
	p/ 10/86	r/ 9/86	10/85	9/86	10/85
Nonag. Wage & Salary	28800	31150	29450	-2350	-650
Construction	1500	1600	1850	-100	-350
Manufacturing	3600	4800	2850	-1200	750
Food & Kindred Prod.	800	1900	700	-1100	100
Lumber & Paper Prod.	2550	2650	1900	-100	650
All Other Mfg.	250	250	250	0	0
Trans. Comm. & Utilities	1950	2250	2000	-300	-50
Trade	8900	4650	4950	-250	-150
Wholesale	400	400	400	0	0
Retail	8000	4250	4150	-250	-150
Finance Ins. & R.E.	1100	1100	1150	0	-50
Mining Services & Misc.	4500	4750	4600	-250	-100
Government	11750	12000	12450	-250	-700
Federal	2100	2200	2050	-100	50
State	5150	5300	5500	-150	-350
Local	4500	4500	4900	0	-400

Hours and Earnings

By John Boucher

Current Trends

Like other economic indicators tracking the health of Alaska's economy, the hours and earnings estimates show a broad based downturn in Alaska's economy. The hours and earnings estimates, for every industry tracked, indicate the average weekly paycheck in Alaska is shrinking. In most industries average weekly hours and average hourly wage are also down.

Preliminary and Revised Estimates

As indicated in the Alaska article, the reliability of a current estimate is based upon the strength of the sample of employer reported data. Nowhere is this more true than in estimates of hours and earnings. Hours and earnings estimates are based entirely on the sample and do not have the benefit of using seasonal patterns or other historical data. While analyst judgement can be used to adjust the estimates for an industry, analyst discretion cannot override the sample to the extent possible when estimating employment. Revisions in the hours and earnings data can sometimes be fairly dramatic if key members of the sample are missing from the preliminary estimate. Until last year, this problem was so severe that the estimates for hours and earnings lagged the estimate for employment by one month.

Despite the lack of sample for the current months estimate, the trend for revision between the preliminary and revised hours and earnings estimates is not following the same pattern as employment. Revised hours and earnings estimates are as likely to be higher than the preliminary estimate as they are lower. For example, in comparing the September 1986 preliminary estimates to the revised estimates five of the ten industries tracked were revised upward and the other five industries were revised downward.

The difference in estimating techniques between the hours and earnings and the employment estimates explain the different results. When the sample is inadequate in estimating employment, historical data is generally used to estimate the current months level of employment (see Alaska article). Unfortunately, using historical data tends to overestimate employment because of the success of the Alaskan economy in the past. Since the hours and earning estimates do not use historical data in the absence of sample, there is no tendency toward an upward bias during the preliminary estimates when sample is scarce. Therefore, the hours and earning sample based estimates are as likely to be revised up as they are down.